

AMENDMENTS TO THE CLAIMS

Claims 1-10 (Cancelled)

11. (Previously Presented) A data transmission apparatus for transmitting data packets, said transmission apparatus comprising:

a transmitter operable to transmit the data packets, said transmitter comprising a priority assignment part, a packet transmitter, a reception state receiver and a packet retransmitter; and

a receiver operable to receive the data packets, said receiver comprising a packet receiver, a reception state transmitter and a retransmission request transmitter,

wherein said priority assignment part is operable to assign priorities to the data packets,

wherein said packet transmitter is operable to transmit a priority-assigned packet,

wherein said reception state receiver is operable to receive information related to a packet reception state of said receiver,

wherein said packet retransmitter is operable to perform packet retransmission in response to a retransmission request from said receiver,

wherein said packet receiver is operable to receive the priority-assigned packet provided by said packet transmitter and to detect packet loss information,

wherein said reception state transmitter is operable to transmit the information related to the packet reception state, which is based on the packet loss information detected by said packet receiver,

wherein said retransmission request transmitter is operable to transmit the retransmission request if any packet of high priority is detected as having been lost, and

wherein said priority assignment part is further operable to change a manner of assigning priorities to the data packets so that a number of times a high priority is assigned is decreased when the packet reception state does not meet a parameter, and the number of times the high priority is assigned is increased when the packet reception state meets the parameter.

12. (Previously Presented) The data transmission apparatus according to claim 11, wherein

said reception state transmitter is operable to transmit the information related to the packet reception state including information related to a packet loss ratio of packets lost at said packet receiver, and

said priority assignment part is operable to change the manner of assigning priorities to the data packets so that the high priority is assigned to a lower ratio of packets when the information related to the packet loss ratio indicates that the packet loss ratio is larger than a predetermined value, and so that the high priority is assigned to a higher ratio of packets when the information related to the packet loss ratio indicates that the packet loss ratio is smaller than the predetermined value.

13. (Previously Presented) The data transmission apparatus according to claim 11, wherein said priority assignment part is further operable to

classify any packet including coded data derived from moving pictures into an intra-coded packet carrying intra-frame coded data, or an inter-coded packet carrying inter-frame coded data, and

based on the information related to the packet reception state, change the manner of assigning priorities to the data packets according to packet type.

14. (Previously Presented) The data transmission apparatus according to claim 13, wherein based on the information related to the reception state, said priority assignment part is further operable to change between

a first priority assigning manner wherein intra-coded packets are assigned with a high priority, and inter-coded packets are assigned with a low priority, and

a second priority assigning manner wherein every packet is assigned with a high priority.

15. (Previously Presented) The data transmission apparatus according to claim 13, wherein based on the information related to the reception state, said priority assignment part is further operable to change among

a first priority assigning manner wherein intra-coded packets are assigned with either a high or low priority at a predetermined ratio, and inter-coded packets are assigned with a low priority,

a second priority assigning manner wherein the intra-coded packets are assigned with a high priority, and the inter-coded packets are assigned with a low priority, and
a third priority assigning manner wherein every packet is assigned with a high priority.

16. (Previously Presented) A data transmission method for transmitting data packets from a transmitter to a receiver, said transmission method comprising:
assigning, at the transmitter, priorities to the data packets;
transmitting, from the transmitter, a priority-assigned packet;
receiving, at the transmitter, information related to a packet reception state of the receiver;

performing packet retransmission, at the transmitter, in response to a retransmission request from the receiver;

receiving, at the receiver, the priority-assigned packet and detecting packet loss information;

transmitting, from the receiver, the information related to the reception state of the receiver based on the packet loss information;

transmitting, from the receiver, the retransmission request if any packet of high priority is detected as having been lost,

wherein said assigning priorities comprises changing a manner of assigning priorities to the data packets so that a number of times a high priority is assigned is decreased when the packet reception state does not meet a parameter, and the number of times the high priority is assigned is increased when the packet reception state meets the parameter.

17. (Previously Presented) The data transmission method according to claim 16, wherein

in said transmitting of the information from the receiver, the information related to the reception state includes information related to a packet loss ratio of packets lost at the receiver, and

in said assigning of priorities at the transmitter, the manner of assigning priorities to the data packets is so changed that the high priority is assigned to a lower ratio of

packets when the information related to the packet loss ratio indicates that the packet loss ratio is larger than a predetermined value, and that the high priority is assigned to a higher ratio of packets when the information related to the packet loss ratio indicates that the packet loss ratio is smaller than the predetermined ratio.

18. (Previously Presented) The data transmission method according to claim 16, wherein in said assigning of priorities at the transmitter,

any packet including coded data derived from moving pictures is classified into an intra-coded packet carrying intra-frame coded data, or an inter-coded packet carrying inter-frame coded data, and

based on the information related to the packet reception state, the manner of assigning priorities to the data packets according to packet type are changed.

19. (Previously Presented) The data transmission method according to claim 18, wherein the manner of assigning priorities to the data packets is changed between

a first priority assigning manner wherein intra-coded packets are assigned with a high priority, and inter-coded packets are assigned with a low priority, and

a second priority assigning manner wherein every packet is assigned with a high priority.

20. (Previously Presented) The data transmission method according to claim 18, the manner of assigning priorities to the data packets is changed among

a first priority assigning manner wherein intra-coded packets are assigned with either a high or low priority at a predetermined ratio, and inter-coded packets are assigned with a low priority,

a second priority assigning manner wherein intra-coded packets are assigned with a high priority, and said inter-coded packets are assigned with a low priority, and

a third priority assigning manner wherein every packet is assigned with a high priority.

21. (Currently Amended) A data transmission apparatus for transmitting data to a reception apparatus on a packet basis, the data transmission apparatus comprising:

priority assignment part operable to assign, ~~priorities~~ on a packet basis, priorities to every packet;

packet transmitter operable to transmit a priority-assigned packet;

reception state receiver operable to receive a packet reception state including a packet loss ratio in the reception apparatus; and

packet retransmitter operable to perform retransmission of the priority-assigned packet in response to a retransmission request from the reception apparatus, wherein

the priority assignment part changes a manner of priority assignment such that a ~~packet of high priority occurs with a low probability when the reception state is bad, and with a high probability when the reception state is good~~ number of packets that are high in priority is decreased when the packet loss ratio is larger than a predetermined value and is increased when the packet loss ratio is smaller than the predetermined value.

22-24. (Cancelled)

25. (Previously Presented) The data transmission apparatus according to claim 21, wherein

the priority assignment part classifies any packet including coded data derived from moving pictures as a packet type pertaining to intra-coded packets carrying intra-frame coded data, or a packet type pertaining to inter-coded packets carrying inter-frame coded data, and

the priority assignment part changes, based on the reception state, a manner of priority assignment determined for each packet type.

26. (Previously Presented) The data transmission apparatus according to claim 25, wherein the priority assignment part changes, based on the reception state, the manner of priority assignment between

a first priority assigning manner of assigning a high priority to the intra-coded packets, and a low priority to the inter-coded packets, and

a second priority assigning manner of assigning a high priority to any packet.

27. (Previously Presented) The data transmission apparatus according to claim 25, wherein the priority assignment part changes, based on the reception state, the manner of priority assignment between

a first priority assigning manner of assigning a high priority to a part of the intra-coded packets, and a low priority to remaining packets,

a second priority assigning manner of assigning a high priority to the intra-coded packets, and a low priority to the inter-coded packets, and

a third priority assigning manner of assigning a high priority to any packet.

28. (Currently Amended) A data transmission method for transmitting data to a reception apparatus on a packet basis, the method comprising:

assigning ~~priorities~~ on a packet basis, priorities to every packet;

transmitting a priority-assigned packet;

receiving a packet reception state including a packet loss ratio in the reception apparatus; and

performing retransmission of the priority-assigned packet in response to a retransmission request from the reception apparatus, wherein

assigning priorities changes a manner of priority assignment such that ~~a packet of high priority occurs with a low probability when the reception state is bad, and with a high probability when the reception state is good~~ number of packets that are high in priority is decreased when the packet loss ratio is larger than a predetermined value and is increased when the packet loss ratio is smaller than the predetermined value.

29-31. (Cancelled)

32. (Previously Presented) The data transmission method according to claim 28, wherein

assigning priorities classifies any packet including coded data derived from moving pictures as a packet type pertaining to intra-coded packets carrying intra-frame coded data, or a packet type pertaining to inter-coded packets carrying inter-frame coded data, and

assigning priorities changes, based on the reception state, a manner of priority assignment determined for each packet type.

33. (Previously Presented) The data transmission method according to claim 32, wherein assigning priorities changes, based on the reception state, the manner of priority assignment between

a first priority assigning manner of assigning a high priority to the intra-coded packets, and a low priority to the inter-coded packets, and

a second priority assigning manner of assigning a high priority to any packet.

34. (Previously Presented) The data transmission method according to claim 32, wherein assigning priorities changes, based on the reception state, the manner of priority assignment between

a first priority assigning manner of assigning a high priority to a part of the intra-coded packets, and a low priority to remaining packets,

a second priority assigning manner of assigning a high priority to the intra-coded packets, and a low priority to the inter-coded packets, and

a third priority assigning manner of assigning a high priority to any packet.

35. (Currently Amended) A data transmission method for transmitting data to a reception apparatus on a packet basis, the method comprising:

assigning, ~~priorities on a packet basis, priorities to every packet;~~

providing an instruction to transmit a priority-assigned packet;

receiving and acquiring a packet reception state including a packet loss ratio in the reception apparatus; and

providing an instruction to perform retransmission of the priority-assigned packet in response to a retransmission request from the reception apparatus, wherein assigning priorities changes a manner of priority assignment such that ~~a packet of high priority occurs with a low probability when the reception state is bad, and with a high probability when the reception state is good~~ number of packets that are high in priority is decreased when the packet loss ratio is larger than a predetermined value and is increased when the packet loss ratio is smaller than the predetermined value.

assigning priorities changes, based on the reception state, a manner of priority assignment determined for each packet type.

33. (Previously Presented) The data transmission method according to claim 32, wherein assigning priorities changes, based on the reception state, the manner of priority assignment between

a first priority assigning manner of assigning a high priority to the intra-coded packets, and a low priority to the inter-coded packets, and

a second priority assigning manner of assigning a high priority to any packet.

34. (Previously Presented) The data transmission method according to claim 32, wherein assigning priorities changes, based on the reception state, the manner of priority assignment between

a first priority assigning manner of assigning a high priority to a part of the intra-coded packets, and a low priority to remaining packets,

a second priority assigning manner of assigning a high priority to the intra-coded packets, and a low priority to the inter-coded packets, and

a third priority assigning manner of assigning a high priority to any packet.

35. (Currently Amended) A data transmission method for transmitting data to a reception apparatus on a packet basis, the method comprising:

assigning ~~priorities on a packet basis,~~ priorities to every packet;

providing an instruction to transmit a priority-assigned packet;

receiving and acquiring a packet reception state including a packet loss ratio in the reception apparatus; and

providing an instruction to perform retransmission of the priority-assigned packet in response to a retransmission request from the reception apparatus, wherein assigning priorities changes a manner of priority assignment such that ~~a packet of high priority occurs with a low probability when the reception state is bad, and with a high probability when the reception state is good~~ number of packets that are high in priority is decreased when the packet loss ratio is larger than a predetermined value and is increased when the packet loss ratio is smaller than the predetermined value.